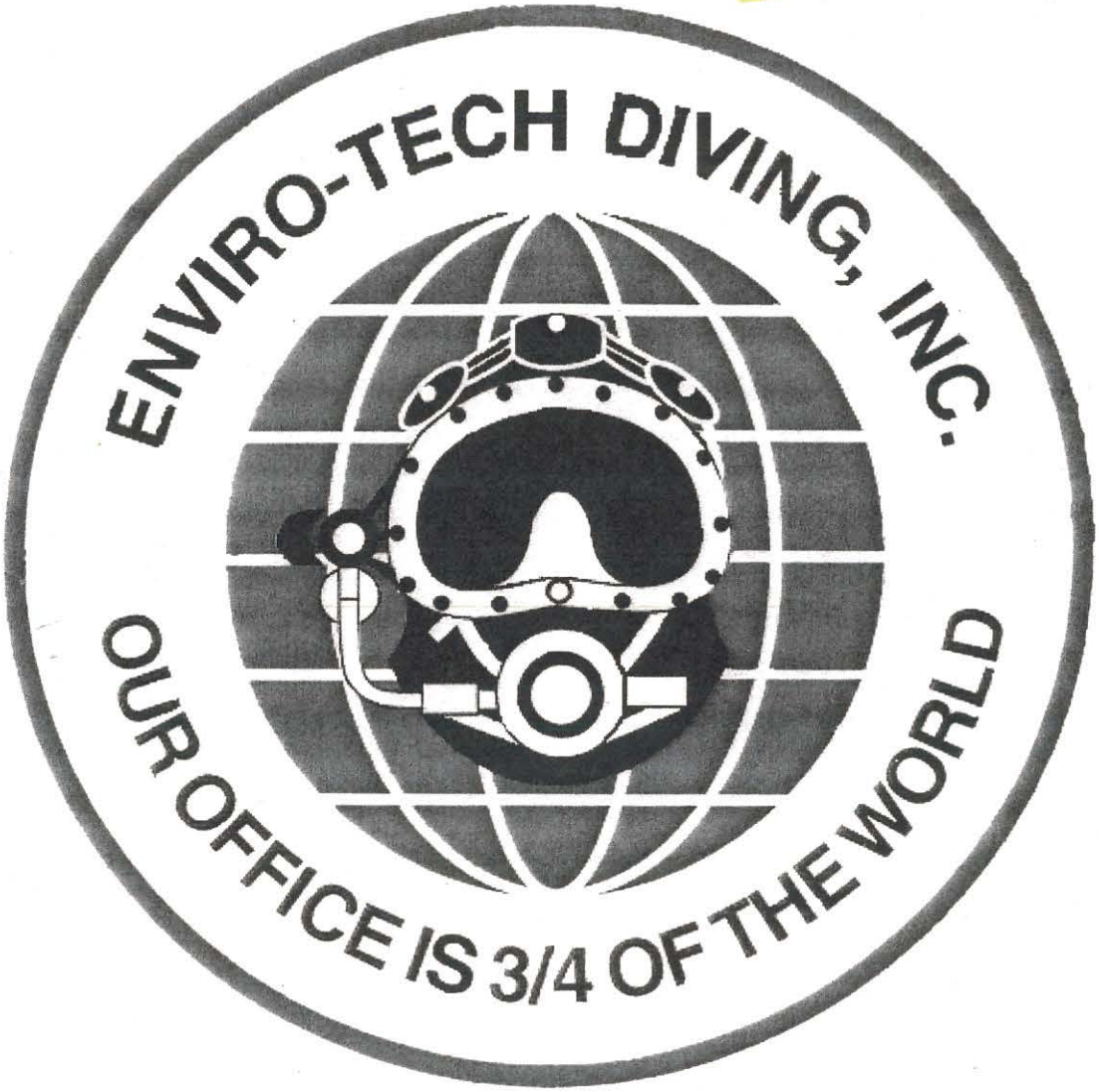
COPY

UNDERWATER INVESTIGATIONS & INSPECTIONS

AK00528 68

NORTHERN VICTOR



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P/V NORTHERN VICTOR
UDAGAK BAY
DIVE SURVEY 2005

BEST MANAGEMENT PRACTICES
M/V NORTHERN VICTOR
2006

ICICLE SEAFOODS, INC.
4019-21st Avenue West
Seattle, WA 98199
(206) 292-0988

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Signatory Statement

Vessel Manager: Robert L. Larsen on 2-14-06

Safety Manager: [signature] on 2-14-06

Captain: [signature] on 2.15.06

Chief Engineer: [signature] on 2-15-06

Q.A Manager: [signature] on 2-15-06

Production Manager: [signature] on 2/15/06

As required under NPDES Permit # AK005286-8, this BMP plan has been developed for the M/V Northern Victor, and has been reviewed and accepted by the above listed crewmembers.

Icicle Seafoods and the M/V Northern Victor are committed to the intent and purpose of this plan and submit this document in voluntary compliance to the US EPA under NPDES authorization

Best Management Practices Policy

It is the policy of Icicle Seafoods, Inc. to operate the M/V Northern Victor in an environmentally sound manner, while processing delivered round fish & crab. During the course of production, it is also our intent to maximize all recoverable protein, while minimizing any resulting waste.

Description of Facility

The M/V Northern Victor is a 380 foot self-propelled seafood processing vessel with a maximum operational crew of 230 persons. It operates up to 9 months/year at its primary anchorage located in Udagak Bay - Unalaska Island, AK. The target species include Alaskan Pollock, Pacific Cod, and Crab. In the summer months, the Northern Victor may also participate in salmon, herring, or crab processing at alternate locations in Alaska. Between seasons, the vessel is moored in Seattle, where repairs & maintenance is effected. Historically, the vessel has made 2 round trip voyages to Alaska per year.

The M/V Northern Victor is a former cargo vessel, built in 1945, and later converted to an oil drilling & support vessel in 1972. The vessel has most recently undergone extensive re-design in 1989, with her conversion to a fish processing vessel. A series of factory upgrades have improved efficiencies and expanded product mix capabilities. The M/V Northern Victor currently produces the following frozen products:

1) Alaskan Pollock - fillet block, mince block, IQF fillets, surimi, stomachs & roe
2) Pacific Cod - H & G and fillets
3) Crab - frozen sections
4) Other - salmon, herring, etc.

Additionally, the vessel has the capacity to produce dried fishmeal, and oil.

The M/V Northern Victor is self-contained, garnering its own power generating plant, running fish and crab processing lines, and housing its crew. The vessel maintains refrigerated seawater holding tanks for storage of fish upon receipt from catcher vessels. The primary fish hold is refrigerated, and is dedicated to storage of finished product. Additionally, the vessel has a number of dry stores used for storage of packaging materials, additives, and provisions. Manning includes complete navigation, engineering, galley, and administrative crews, as well as, a full compliment of processing crew.

Seafood wastes consist of fish heads, viscera, trimmings, skins, and a small amount of discarded round fish. The majority of waste is captured beneath the Baader processing machinery by transfer water which carries the material through a series of chutes and flumes to a dewatering station, prior to its introduction to the fishmeal process. Any waste which falls to the floor is washed into 1 of 2 sumps where it is ground into 1/2" or smaller particles before discharge via an outfall pipe to the sea floor 90 ft below the vessel.

Production rates vary, and are dependant upon weather, fishing conditions, and regulatory influence.

Facility Goals for Improvement

A BMP Committee is in place whose mission is to seek new ways to increase recovery rates in all phases of operation, and decrease waste and energy consumption throughout the vessel. The goal is to eliminate fish waste from the fish waste discharge sumps on the process deck. Our objective is to fully utilize each fish in an effort to achieve:

- The maximum amount of primary product for human consumption
- The minimum amount of fish waste stream routed to be converted in to dry fishmeal and fish oil
- The minimum amount of waste discharged in to the surrounding environment

Good Housekeeping Policy

All chemicals on-board the vessel are handled and stored in a manner designed to limit personnel exposure, prevent contamination of product, and prevent contamination to the surrounding habitat of Udagak Bay. Only properly trained personnel are authorized to handle and dispense potentially hazardous chemicals.

M/V Northern Victor's QA staff monitor all aspects of production within the processing plant, monitor individual equipment, and oversee clean-up, in an effort to assure proper sanitation standards and sufficient controls of microbial growth.

Equipment Maintenance & Repair

The M/V Northern Victor maintains a certified engineering staff, and a fully-stocked parts inventory. The staff consists of a compliment of engineers, mechanics, electricians, factory technicians, and refrigeration specialists.

Engines, generators, and major processing equipment are maintained during scheduled overhauls which occur during vessel down times between seasons. An extensive inventory of spare parts is maintained on-board and allows most repairs to be effected during continuous operation.

The vessel's design is engineered with redundancy in most major systems, which generally allows for uninterrupted production.

The engineering department is staffed around the clock, with personnel trained in the maintenance and repair of all equipment and systems in the factory. Due to an exhaustive preventative maintenance program, breakdowns rarely occur, and if they do, they are often of short duration.

Materials Accounting

Round fish, delivered by catcher vessels, is transferred via Ryan pump, dewatered, and weighed. If any by- catch exists, it is weighed and deducted from the total hail, before being returned to the catcher vessel for disposal at-sea. All Finished goods are tallied, and a total weight is recorded prior to shipping. All fishmeal bags are tallied, and a total weight is taken prior to shipping. Water usage is monitored continuously, and a Daily Usage log is maintained by the Quality Assurance Department. Fish recovery rates are monitored continuously, with hourly entries. Discharge rates are tracked on a monthly basis by deducting finished pounds from raw pounds. The resulting value will be included in the annual report.

Inspection & Records

All departments on the vessel maintain permanent records contemporaneously and forward appropriate reports to the home office in Seattle. All records and reports required by the vessel NPDES permit are available on board for inspection as required. These records include, among other things, pilot house logs, records on operating days, major and minor equipment repairs, purchased fish & crab, daily production, chemical usage, sea surface and shoreline inspection, etc.

Employee Training

All employees are instructed on safety procedures and GMP's during their pre-work orientations. The Vessel Manager and plant supervisors are responsible for overseeing the proper operation of the factory, all process flow streams, and for training of selected personnel to monitor critical control points. These include:

- Setting all fresh & saltwater hose outlets to the minimum amount of flow that will allow proper product flow and acceptable quality
- Shutting off all non-essential water flow during breaks and non-production times to reduce water usage
- Clearing drains, conveyors, and tables of waste build-up to insure proper stream flow
- Monitoring processing activities to maximize product utilization and minimize waste
- Communicating disruptions in waste stream to Vessel Management
- Insuring proper accounting techniques so production records accurately reflect waste discharge
- Insuring the waste stream is kept clear of all non-organic material

A monthly discharge monitoring report shall be kept to track raw and finished pounds and water usage. A shoreline and sea surface monitoring log shall be maintained as described in the Monitoring & Assessment section of this plan. The Engineering Department will maintain all logs regarding maintenance and repair of all grinders, screening Equipment, and factory equipment. Annual reports will describe any non-compliance with any portion of the permit. All records are maintained for a period of 5 years, (2 years on-site).

Monitoring &. Assessment

The sea surface and shoreline are monitored each day the vessel is stationed at Udagak Bay. Monitoring is conducted via visual observation from the bridge of the vessel, and weather permitting, from trips ashore and around the perimeter of the vessel via small skiff. If any residue, or processing waste is observed in the surrounding area (in excess of permissible levels), it is addressed by small response teams dispatched from the vessel.

Record Keeping

Sea Surface and Shoreline Monitoring

The water surface and shoreline shall be monitored each day for any surface foam or processing waste. The procedure for each is as follows.

Shoreline

- Obtain a blank copy of the shoreline monitoring report from the bridge office.
- Fill in all relevant before monitoring boxes
- Obtain a set of binoculars
- Starting on the port bridge wing and continuing all the way around the bridge deck completing a 360 deg circle. Scan the shoreline for any vessel produced processing waste.
- If weather permits, the skiff shall be used for close up inspection of all beaches in Udagak Bay within a 0.25 mile radius of the processing vessel.
- Fill in the remaining boxes on the form
- If any processing waste is noted on the beaches a recovery team shall be sent to clean the area as soon as the weather permits safe operation of the skiff.

Sea Surface

- Obtain a blank copy of the sea surface monitoring log from the bridge office.
- Fill in all relevant before monitoring boxes.
- Obtain a set of binoculars
- Starting on the port bridge wing and continuing all the way around the bridge deck completing a 360 deg circle. Scan the sea surface for a 100 yard perimeter around the vessel for any vessel produced foam, sheens, or floating scum.
- Fill in remaining boxes on the form

Settable Solids /PH

The settable solids test is the measure of the volume of solids in one liter of sample effluent that will settle to the bottom of an Imhoff cone during a specified period of time. This test is performed weekly on each outfall that has potential for outfall discharge.

Equipment Needed

- Imhoff Cone
- Stirring Rod
- Imhoff Rack
- Stop Watch
- Data sheet
- PH Meter

Data Sheet

- Date & Time of sampling
- Sample size
- PH
- Size of particulate matter
- Name of person doing sampling

Sampling Procedure

- Collect 1000ml of effluent in a clean, dry Imhoffcone
- Place cone in rack for 45 minutes
- Gently stir sample for 15 seconds
- Wait an additional 15 minutes
- Record amount of settable solids on data sheet
- Dump left over effluent, clean and dry cones

Total Suspended Solids

Equipment

- 1 clean, dry 1 liter sampling container (provided by the lab)
- 1 insulated cooler with gel ice
- 1 temperature sampling medium (provided by the lab)
- Sampling forms (provided by the lab)

Sampling Procedures

- Ensure the factory is at full production
- Note start time on form
- Turn on sampling port and allow to run for a minimum of 5 minutes
- Fill container to the top of
- Seal container and place in cooler with gel ice and transport to the lab
- Notify lab that a sample is inbound

BOD 5 Sampling

The Biochemical Oxygen demand Test shall be performed a minimum of once a month and shall consist of a composite sample of at least 4 grab samples taken over a 24 hour period. One container shall be filled for each factory effluent discharge.

Onboard the M/V northern Victor we depend on SGS laboratories an independent lab in Anchorage. Due to the isolation of the processing vessel and the extreme weather in the processing area timing and logistics of sampling to coordinate with limited transportation to Anchorage is essential and at times impossible to accommodate to achieve a successful sampling outcome.

BOD 5

Equipment

- 1 clean, dry 1 liter sampling container (provided by the lab)
- 1 insulated cooler with gel ice (provided by the lab)
- 1 temperature sampling medium (provided by the lab)
- Sampling forms (provided by the lab)

Sampling Procedures

- Ensure factory is at full production
- Note start time on form
- Turn on sampling port and allow to run for a minimum of 5 minutes
- Fill containers to ¼ mark, place in refrigerator
- Over the next 24 hours 3 more samples shall be taken to fill the containers
- After filling seal container place in cooler with gel ice and transport to lab
- Notify lab that a sample is inbound

Security

Waste system components, including tanks, conveyors, flumes, pumps, sumps as well as grinder pumps, rotary screens and discharge hoses are all visible and inspected regularly. Therefore any tampering would be noticed immediately by Production Supervisors or the Q.A Technicians who routinely survey the affected areas.

Water Quality Assessment Reporting

To properly asses the water quality in Udagak Bay Icicle Seafoods shall a conduct water quality as required in our permit Icicle Seafoods shall provide the following information in the following manner.

1- provide 7 days of water quality measurements at a minimum of 3 near-field "effect" stations, 12 far-field "effect" stations and 3 far-field "control "stations.
2- provide measurements of D.O. concentrations, temperature, salinity, density and depth at 1 meter intervals to the limits of our probe.

Equipment

The Northern Victor uses the YSI-85 Handheld Oxygen, Conductivity, and Temperature System. It shall be sent to the manufacture every year for calibration.

Before each use the Ysi-85 must be calibrated onsite using the following procedures

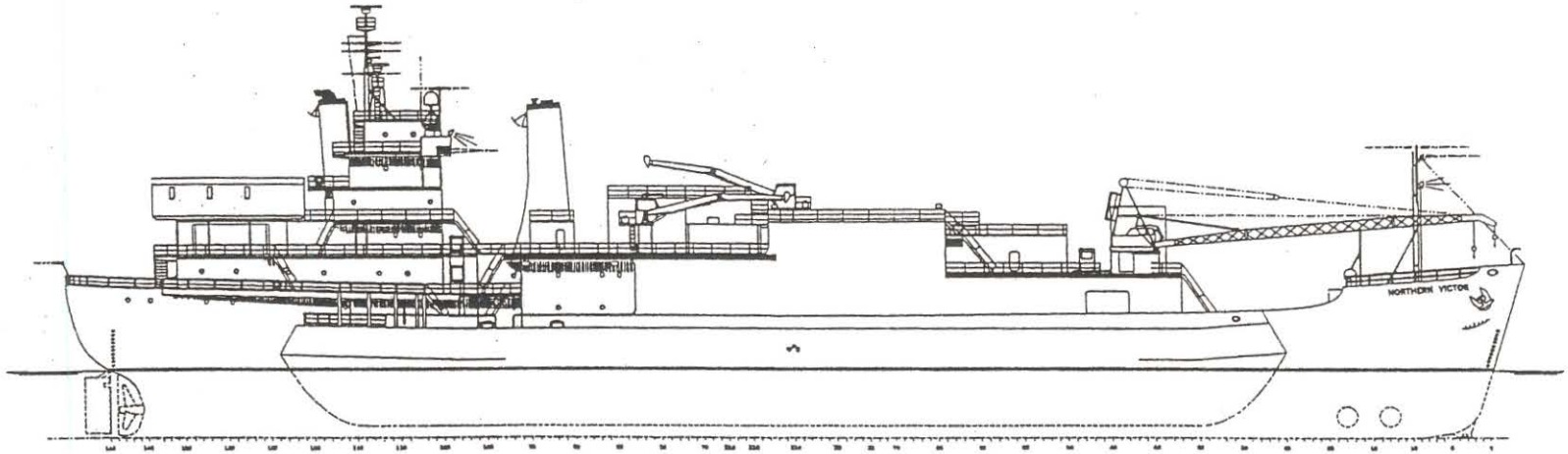
1- Ensure the sponge inside the instruments calibration chamber is wet
2- Insert probe into chamber
3- Turn instrument on, press MODE until DO is displayed
4- Wait until all readings stabilize (about 15 minutes)
5- Enter local altitude
6- Make sure readings are stable and press ENTER.

Data Collection Methodology

1- Tie a weight to end of probe to assist probe going straight down
2- Record DO, conductivity, and salinity every 3 feet on instrument
3- Continue until bottom is reached or limit of the instrument
4- Pull probe from water, rinse with distilled water
5- Place probe into chamber
6- Record readings on form
7- Clear Instrument of all readings
8- Move to next station

PRINCIPAL CHARACTERISTICS

LENGTH OVERALL	378'-2"
LENGTH BETWEEN PERPS	358'-6"
BEAM, MOLDED	70'-0"
DEPTH AT SIDE, MOLDED	28'-7-3/4"
HOLD CAPACITY	91,000 CU. FT.



ELLIOTT BAY DESIGN GROUP, LTD.
NAVAL ARCHITECTS Seattle, WA MARINE ENGINEERS

CLIENT: ICICLE SEAFOODS
Seattle, WA

PROJECT: NORTHERN VICTOR

TITLE: OUTBOARD PROFILE

SIZE	DWG NO.	REV
B		-

DWN	DATE	CKD	DATE	APVD	DATE
Dmw	1/95				

SCALE 1/32" = 1'-0" FILE NAME NORVICT.DWG SHEET 1 OF 1

NORTHERN VICTOR NPDES Information

Discharge Outfall List

Outfall Number	Discharge Description	Flow Rate in MGD	Flow for Year in MG	Discharge Location on ship
1	Blower seal water	0.0120	2.0880	Frame X-8 port
6	Port factory waste water	1.0000	174.0000	Frame 120 stbd
7	Stbd factory waste water	1.0000	174.0000	Frame 120 stbd
8	Refrigeration cooling water	1.7000	295.8000	Frame 56 stbd
10	Sewage treatment plant	0.0075	1.3050	Frame 123 port
12	Boiler blowdown	0.0002	0.0348	Frame 123 port
13	Evaporative desalinator	0.0000	0.0000	Frame 123 port
14	Engine cooling	1.2000	208.8000	Frame 103 port
15	Laundry gray water	0.0010	0.1740	Frame 82 stbd
16A	Gray water - lavs	0.0020	0.3480	Frame 78 stbd
16B	Gray water - lavs	0.0020	0.3480	Frame 100 port
16C	Gray water - lavs	0.0020	0.3480	Frame 124 port
17	Galley gray water	0.0080	1.3920	Frame 124 port
18	Shore water bypass (fresh water surplus)	0.0500	8.7000	Frame 0 foredeck
19	Ballast water	0.0000	0.0000	Frame 123 stbd
20	Bilge water	0.0000	0.0000	Frame 123 stbd
21	Deck drains fwd	0.0050	0.8700	Frame 63 & X-8 port
22	Deck drains aft	0.0050	0.8700	Frame 63 & X-8 stbd
	Total	4.9947	869.0778	

Seawater Suction List

Suction Number	Sea Suction Description	Size	Pumps	Location on ship
1	Emergency fire pump suction	10"	1 x 4"	Frame 79 port
2	Refrigeration condenser water suction	10" dia	3 x 4"	Frame 79 stbd
3	Factory seawater fwd suction	12" dia	5 x 4"	Frame 82 port
4	Factory seawater aft suction	12" dia	5 x 4" (shared)	Frame 100 port
5	Bilge, fire pump suction	5" dia	1 x 4"	Frame 103 port
6	Bilge, ballast suction	5" dia	2 x 3"	Frame 103 stbd
7	Main engine cooling suction, fwd low	8" dia	3 x 4"	Frame 105 stbd
8	Main engine cooling suction, aft low	8" dia	3 x 4" (shared)	Frame 117 stbd
9	Main engine cooling suction, aft high	8" dia	3 x 4" (shared)	Frame 117 stbd

M/V Northern Victor
Outfall Schematic
Printed: 2/17/2006